

## **EXHIBIT 2**

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF VIRGINIA  
Alexandria Division**

UNITED STATES, et al.,	)	
	)	
Plaintiffs,	)	
	)	
v.	)	No. 1:23-cv-00108-LMB-JFA
	)	
GOOGLE LLC,	)	
	)	
Defendant.	)	
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**NOTICE OF DEPOSITION**

PLEASE TAKE NOTICE that pursuant to Rule 30(b)(6) of the Federal Rules of Civil Procedure, Plaintiffs will take the deposition of Google, on August 30, 2023. The deposition shall occur at the U.S. Attorney's Office for the Eastern District of Virginia, located at 2100 Jamieson Ave, Alexandria, VA 22314, or as otherwise agreed to by the parties. The deposition will be conducted by oral examination before a certified court reporter authorized to administer oaths and will continue from day to day until completed. The deposition will be recorded by stenographic means and by videotape.

Pursuant to Rule 30(b)(6) of the Federal Rules of Civil Procedure, Defendant shall designate and produce for deposition one or more officers, directors, employees, agents or other persons to testify on its behalf regarding the topics and subject areas set forth in Exhibit A attached hereto. If the designated representative or representatives do not have such knowledge, they are required under Rule 30(b)(6) to acquire such knowledge through whatever reasonable investigation may be necessary.

Dated: August 9, 2023

BY: /s/ Julia Tarver Wood

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## **EXHIBIT A**

### **I.**

#### **DEFINITIONS AND INSTRUCTIONS**

1. The definitions and instructions below are provided solely for the purpose of this deposition notice.
2. For all topics below, to the extent the nature or type of the auction, e.g., first- versus second-price auction, is relevant to or in any way affects any response that distinction must be provided and explained. If no distinction is made in a response, any response will be presumed to apply equally to first- and second-price auctions (and any other types of auctions).
3. The term “AdSense” means Google’s ad network for publishers.
4. The term “Ad Serving” means the term as used in the “DVAA P&L” tab of GOOG-DOJ-AT-02641400 or as otherwise used in Google documents.
5. The term “AdX” means the display advertising exchange operated by Google, now part of the Google Ad Manager product suite.
6. The term “AFC” means AdSense for Content.
7. The term “Alchemist” has the same meaning as used in declaration GOOG-AT-MDL-008842383.
8. The term “allocated cost” means a cost that cannot be directly attributed to the activities of a particular product area, and instead is allocated amongst multiple product areas based upon an allocation methodology or allocation process.
9. The term “allocation processes” means a system of distributing costs using a rational basis of allotment to properly reflect the external income statement classification.

10. The term “booked revenue” means all income records in a firm’s financial records or as used in the “DVAA P&L Definitions” tab of document GOOG-DOJ-AT-02641400 or as otherwise used in Google documents.
11. The term “CID” means “Civil Investigative Demand.”
12. The term “Cloud” means the term as used on page -1901 of GOOG-AT-MDL-004021892 or as otherwise used in Google documents.
13. The term “Contra Revenues” means the term as used on page -1687 of document GOOG-DOJ-09731684, a deduction from the gross revenue reported by a business, or as used in other Google documents.
14. The term “COGS” means cost of goods sold.
15. The term “contribution margin” means revenues minus variable costs or as otherwise used in Google documents.
16. The term “Core DVAA” means the business or reporting unit as defined on page -1686 of document GOOG-DOJ-09731684 or as otherwise used in other Google documents.
17. The term “Core DVAA Product Group Set,” which is sometimes abbreviated “Core DVAA – PGS” means the usage of that term on page -6981 of Google document GOOG-AT-MDL-004326981.
18. The term “cost allocations” means apportionment of costs, typically overhead costs, to Google’s various segments, product areas, and individual products and services.
19. The term “CPA” means “Cost per action.”
20. The term “CPC” means “Cost-per click.”
21. The term “CPM” means “Cost-per-thousand impressions.”
22. The term “DBM” means DoubleClick Bid Manager.

23. The term “DBM-Non\_Google” means the business or reporting unit as used in the “DVAA P&L” tab of document GOOG-DOJ-AT-02641400 or as otherwise used in Google documents.
24. The term “direct cost” means a cost that can be identified with or attributed directly to the activities of a particular product area.
25. The term “Display Advertising Business Components” means the DVAA and Core DVAA product areas and the products or services that comprise those product areas including, but not limited to, AdX, AdSense, AFC, DFP, GAM, GDN, DBM, DBM-Non-Google, Ad Serving, Exchange Bidding, and DV360 and any successor and predecessor products and services.
26. The term “DoubleClick for Publishers” (“DFP”) means Google’s Publisher Ad Server, currently part of the Google Ad Manager product suite.
27. The term “Display & Video 360” (“DV360”) means the Demand Side Platform (“DSP”) operated by Google.
28. The term “DVAA” means Display and Video, Apps and Analytics as used in GOOG-AT-MDL-004326981, or as used on page -1686 of document GOOG-DOJ-09731684, or as otherwise used in Google documents.
29. The term “economies of scale” means a reduction in per-unit costs as a result of increased sales volumes.
30. The term “economies of scope” means the benefits, in terms of decreased costs or increased sales, derived from a firm having multiple, generally related, products within its product portfolio.

31. The term “EngPM” means the term as used in the “DVAA P&L Definitions” tab of document GOOG-DOJ-AT-02641400 or as otherwise used in Google documents.
32. The term “Exchange Bidding” means Google’s real-time bidding product for third-party or non-Google ad exchanges, now currently known as “Open Bidding.”
33. The term “Federal Agency Advertiser” means the following agencies of the United States and any components thereof: U.S. Census Bureau, Centers for Medicare and Medicaid Services, Department of Defense Agencies (U.S. Air Force, U.S. Army, U.S. Navy), National Highway Traffic Safety Administration, U.S. Postal Service, and U.S. Department of Veterans Affairs.
34. The term “fixed cost” means costs that do not increase directly with revenue growth.
35. The term “Forecasts” means any analysis, study, report, or any document created to estimate future financial conditions, returns, or other metrics based on past, current, and projected financial conditions.
36. The terms “Google” or “Defendant” mean Google LLC, its domestic and foreign parents, predecessors, divisions, subsidiaries, affiliates, partnerships and joint ventures, and all directors, officers, employees, agents, and representatives of the foregoing. The terms “parent,” “subsidiary,” “affiliate,” and “joint venture” refer to any person in which there is partial (25 percent or more) or total ownership or control.
37. The term “G&A” means general and administrative costs which are costs that are associated directly with the support functions that assist with the general and administrative activities of an entity.
38. The term “GAM” means Google Ad Manager.

39. The term “GBO” means Google’s Global Business Organizations or as otherwise used in Google documents.
40. The term “Google Ad Manager” means a suite of Google ad tech products that includes DFP and AdX.
41. The term “GDN” or “Google Ads” means Google’s advertiser ad network, formerly known as AdWords and Google Display Network (“GDN”).”
42. The term “gross profit” means revenue minus cost of goods sold.
43. The term “gross margin” means gross profit divided by revenues.
44. The term “including” means including but not limited to.
45. The term “Investigation” means any inquiry performed by any state, federal, foreign, or international enforcer or authority.
46. The term “Litigation” means this action *United States et al. v. Google LLC*, No. 1:23-cv-108 in the United States District Court for the Eastern District of Virginia.
47. The term “Long Range Plans” mean plans, documents, or studies prepared for the purpose of providing strategic, operational, or other planning or strategy on a forward-looking basis for a firm.
48. The term “Marketing” means the term as used in the “DVAA P&L Definitions” tab of document GOOG-DOJ-AT-02641400 or as otherwise used in Google documents.
49. The term “marginal cost” means the incremental cost incurred from the production or sale of one extra unit of a product or service.
50. The term “margins” means profits expressed as a percentage of revenues.
51. The term “non-CPM-based pricing” means pricing a display advertising impression on a CPC, CPA, or any basis other than on a CPM basis.



52. The term “net revenue margins” means the term used in GOOG\_DOJ\_03156193 or as otherwise used in Google’s documents.
53. The term “operating costs” means ongoing expenses related to the operation of a business, device, component, service, or any portion of a business or as otherwise used in Google documents.
54. The term “operating expenses” mean, the ongoing expenses a business accrues through its normal operations, excluding those directly involved in the production of goods and services.
55. The term “operating profit” means gross profit less operating expenses and depreciation and amortization.
56. The term “Person” means any natural person, corporate entity, business entity, partnership, association, joint venture, governmental entity, or trust.
57. The term “P&L statements” means profit and loss statements, which display the revenues earned by a product, segment, or firm, along with associated costs, resulting in a profit or loss. Document GOOG-DOJ-AT-02641400 is an example of a “P&L statement.”
58. The term “principal-agent considerations” means factors, considerations, or facts that a firm, employees, or consultants thereof consider in determining whether the firm acts as a principal or agent in a transaction, set of transactions, or in any other situation. As non-exclusive examples of “principal-agent considerations,” Google submitted letters dated August 25, 2017, and October 16, 2017, to the U.S. Securities and Exchange Commission (SEC) regarding revenue reporting and other issues from ads placed on Google Network Members’ properties as well as on other accounting and financial issues regarding File No. 001-37580.

59. The term “Product Area” means the term as used in the “2020 TAC Rates (xBridge)” tab of Google document GOOG-AT-MDL-001064910 (and whether listed as “product\_areas” or “Product Area”), as used in the “plx” tab and abbreviated “pa” in Google document GOOG-DOJ-AT-02643848, or as otherwise used in Google documents.
60. The term “Product Groups,” sometimes abbreviated “PG” means the term as used on page -7011 of Google document GOOG-AT-MDL-004326981 or as otherwise used in Google documents.
61. The term “Product Group Set” or “PGS” means the term as used and abbreviated “PGS” on page -6994 of Google document GOOG-AT-MDL-004326981 or as otherwise used in Google documents.
62. The term “product-level margins” means margins (gross and operating margins) for individual products that are components of DVAA.
63. The term “Profit Center,” which may be abbreviated as “PC” or written as “profit\_center,” means the term as used in the “loverev” tab of the document bearing Bates stamp GOOG-DOJ-32223507 that was produced by Google in the litigation *United States v. Google*, No. 20-cv-3010 (D.D.C.) and that will be produced, in original or updated form, in this Litigation as confirmed in the July 26, 2023 email from Byron P. Becker, counsel for Google, to Plaintiffs or as otherwise used in Google documents.
64. The term “profits” means revenues minus costs.
65. The term “proportionate cost savings” means decrease in costs (COGS plus operating costs) per unit.

66. The term “Publisher Ad Server” means the product used by publishers to manage the sale of display ads on its webpages and that provides functionality such as ad delivery, reporting, and forecasting of availability across direct deals and indirect advertising sales.
67. The term “revenues” means the amount a company receives from selling goods and/or providing services to its customers and clients.
68. The term “RFP” means “Request for Production.”
69. The term “ROIC” or “Return on Invested Capital” means net operating profit after taxes divided by the combined value of equity and debt capital raised, otherwise known as invested capital.
70. The term “revenue recognition” means an accounting principle that determines how and when revenue is recorded.
71. The term “Search” means Google’s Search Advertising business, product area, business unit, as used as a product area on page -1901 of GOOG-AT-MDL-004021892 or as otherwise used in Google documents.
72. The term “Search Litigation” means the litigation *United States v. Google*, No. 20-cv-3010 (D.D.C.).
73. The term “served revenue” is defined in the “DVAA P&L Definitions” tab of document GOOG-DOJ-AT-02641400 or is defined as otherwise used in Google documents.
74. The term “TAC” means traffic acquisition cost.
75. The term “third-party ad exchanges” means a technology platform, not owned or operated by Google, which facilitates the buying and selling of online advertising inventory.

76. The term “TI” means “Technical Infrastructure,” the term as used on page -1687 of document GOOG-DOJ-09731684, the “DVAA P&L Definitions” tab of document GOOG-DOJ-AT-02641400, or as otherwise used in Google’s documents.
77. The term “variable cost” means a cost that increases with incremental revenue.
78. The term “variable margin” means a ratio of incremental profits to incremental revenues.
79. Any other capitalized terms that are not otherwise defined in this notice are defined by how they are described in the Amended Complaint.
80. Each subject area is to be construed independently, and no subject area is to be viewed as limiting the scope of any other subject area.
81. Unless otherwise specified, the topics specified below cover the time period January 1, 2014 through the present.

## **II. TOPICS**

1. Collectively and for each individual product within the DVAA and Core DVAA product areas or groups, including AdX, AdSense, AFC, DFP, GAM, GDN, DBM, DBM-Non-Google, Ad Serving, Exchange Bidding, and DV360 and successor and predecessor products and services, Google’s accounting policies and procedures, including how Google calculates profits and margins, including:
  - (a) Definitions of Served Revenue, Booked Revenue, Gross Revenue, and Net Revenue
  - (b) Revenue recognition policies and the relationship among and between the following categories of revenue:
    - i. Served Revenue;
    - ii. Booked Revenue;

iii. Gross Revenue; and

iv. Net Revenue.

(c) Google's treatment of TAC including but not limited to:

- i. what expenditures or costs are included in TAC;
- ii. how such expenditures or costs are measured and/or calculated;
- iii. its impact on profits and margins; and
- iv. any and all principal-agent considerations.

(d) Definition of Cost of Goods Sold (COGS) and explanation of each component category within COGS, including:

- i. whether or to what extent each is a fixed or variable cost;
- ii. whether or to what extent each is a direct or allocated cost; and
- iii. how each is allocated to and/or between different products, product areas, or any other business, reporting, or accounting unit.

(e) Derivation of Contribution Margin, Marginal Cost, Gross Profit, Gross Margin, and Variable Margin;

(f) Definition of Operating Expense and explanation of each component category (such as EngPM, GBO, Marketing, G&A, and TI) within Operating Expenses, including:

- i. whether or to what extent each is a fixed or variable cost;
- ii. whether or to what extent each is a direct or allocated cost; and
- iii. how each is allocated to and/or between different products, product areas, or any other business, reporting, or accounting unit.

(g) Methodology or process of calculating Operating Profit and Operating Margin;

- (h) The identity (by bates number or file names) of all final versions of P&L statements, from 2014 through 2023;
- (i) Google's processes for calculating, evaluating, and forecasting its DVAA and product-level margins for display advertising products, including the individuals or business units involved, key metrics and goals, and financial targets for each year between 2014 through 2023;
- (j) AdX direct, Yavin, Ad Connector dual/hybrid ad server setups, and any other means through which AdX submits bids to publishers that do not use DFP as their Publisher Ad Server, including (a) the extent to which these products/services are available to, marketed to, or used by U.S. publishers, (b) which publishers use these products/services, (c) what types of impressions these products/services bid on, (d) the % of U.S. and worldwide AdX open web display impressions accounted for by these products/services (including broken down by transaction type, e.g., open auction, programmatic guaranteed, programmatic direct, private marketplace), (f) the extent to which these products/services are growing or declining over time, and (g) any plans to deprecate or degrade any of these products and services.;
- (k) The information contained in the following documents:
  - i. GOOG-DOJ-AT-02647840
  - ii. GOOG-DOJ-09731684
  - iii. GOOG-DOJ-03156193
  - iv. GOOG-AT-MDL-001064910

- v. GOOG1-00005900, which Google produced in the Search Litigation and has agreed to reproduce in this Litigation in original or updated form.
  - vi. GOOG-DOJ-AT-02641400
  - vii. GOOG-AT-MDL-004326981
  - viii. GOOG-DOJ-11869565
  - ix. GOOG-DOJ-03736622
  - x. GOOG-AT-MDL-000991610
  - xi. GOOG-DOJ-AT-02649874
- (l) Any changes made to Google's accounting policies and procedures regarding any shift from Combined P&Ls to Stand-Alone P&Ls, including the components, categories, or inputs included in any buy-side lens (including whether that includes any sell-side products) and any sell-side lens (including whether that includes any buy-side products) and the time period of those changes and the personnel responsible for implementing and approving any changes.

2. Cost allocations, including:

- (a) How allocated costs are allocated among:
- i. Google product areas such as DVAA, Search, Search Advertising, YouTube, and
  - ii. Google reporting segments such as Google Services, Google Cloud, and Other Bets;
- (b) How allocated costs are allocated within Display Advertising Business Components to products and services, including AdX, AdSense, AFC, DFP, GAM, GDN, DBM, DBM-Non-Google, Ad Serving, Exchange Bidding, and DV360 and successor and predecessor products and services;

- (c) How allocation processes have changed over time;
- (d) How changes to allocation processes are made, including whether revised allocation processes are applied in a backward-looking manner (e.g., applied to recast or recalculate P&L and other reporting documents after the current and forward-looking allocation processes have been changed), and the nature and scope of that change;
- (e) Why changes to allocation processes were made, including the availability of systems to allocate all costs of business to specific product areas (or any lower- or higher-level), any new systems including any system-generated product area-specific P&Ls or any other P&Ls, whether used for or in support of internal or management reporting or external reporting;
- (f) Who is and was responsible for making such changes for the period 2014-2023; and
- (g) Information contained in the following documents:
  - i. GOOG-DOJ-9731684
  - ii. GOOG-DOJ-32223507, which Google produced in the Search Litigation and has agreed to reproduce in this Litigation in original or updated form.
  - iii. GOOG-DOJ-12508183
  - iv. GOOG-AT-MDL-003565808
  - v. GOOG-AT-MDL-004326981
  - vi. GOOG-DOJ-AT-02643848
  - vii. GOOG-DOJ-03736622



- viii. GOOG1-00005951, which Google produced in the Search Litigation and has agreed to reproduce in this Litigation in original or updated form.
  - ix. GOOG1-00005939, which Google produced in the Search Litigation and has agreed to reproduce in this Litigation in original or updated form.
- 3. Separately for AdX, AdSense, DFP, GAM, GDN, DV360, and successor and predecessor products and services, economies of scale, including:
  - (a) The extent to which increases in volumes, both over the short run (less than 12 months) and long run (longer than 12 months), lead to higher margins via proportionate cost savings, as revenues grow faster than costs.
  - (b) Information contained in the following documents:
    - i. GOOG-DOJ-AT-02643848
    - ii. GOOG-DOJ-32223507, which Google produced in the Search Litigation and which Google has agreed to reproduce in this Litigation.
- 4. Economies of scope between AdX, AdSense, DFP, GAM, GDN, DV360, and successor and predecessor products and services, as well as other components of Google Services, including:
  - (a) Any proportionate cost saving gained by combining two or more of the above products and services;
  - (b) Any increase in sales facilitated by producing two or more of the above products and services;

- (c) The extent to which strategic or operational decisions are made at the DVAA level rather than the level of an individual product or service;
  - (d) Whether Google aims to individually maximize the profits of each product and service, or maximize the value of the collection of DVAA products and services as a whole; and
  - (e) Any assessment Google or its employees or executive made of the revenue or profits attributable to AdX, AdSense, DFP, GAM, GDN, DV360, either individually or in combination.
5. Collectively and for each individual product within the DVAA and Core DVAA product groups, including AdX, AdSense, AFC, DFP, GAM, GDN, DBM, DBM-Non-Google, Ad Serving, Exchange Bidding, and DV360 and successor and predecessor products and services, any Long-Range Plans or Forecasts, including:
- (a) Key performance indicators or key operating metrics such as revenue, profit, gross margin, operating margin, and market share, and growth rates of each;
  - (b) Evaluation of key performance indicators or key operating metrics compared against Long-Range Plans or Forecasts; and
  - (c) Information contained in the document GOOG-DOJ-AT-02647840.
6. Google's policies and practices regarding its use and implementation of non-CPM-based pricing in its display advertising business components including:

- (a) Google's determination on whether to use non-CPM-based pricing including any risks and benefits considered in determining whether to use non-CPM-based pricing, including any product, business, accounting, partnership, technical, or other considerations;
- (b) Identification and operation of any algorithms, processes, or source code used by any of Google's display advertising business components to implement or evaluate whether to use non-CPM-based pricing in any of its display advertising business components;
- (c) Google's accounting policies and practices regarding non-CPM-based pricing including how Google determines its allocation processes, any principal-agent considerations, and how it measures any contra revenues, contribution margin, gross profit, gross margin, marginal costs, net revenue margins, operating costs, operating expenses, ROIC, revenue recognition, and TAC;
- (d) Whether any impressions purchased and priced by non-CPM-based pricing go unsold and the subsequent disposition, if any, of those impressions;
- (e) The implementation, including the calculation, of non-CPM-based pricing by any of Google's display advertising products, including AdX, AdSense, GDN, Google Ads, DFP, DBM, and DV360;
- (f) Google's policies and procedures regarding any reconciliation, adjustments to charges, or amounts paid (including discounts or rebates) regarding non-CPM-based pricing that are made after an impression is won at auction;

- (g) Whether non-CPM-based pricing is a differentiating factor between ad networks and DSPs.
7. For Google's Ariane and RASTA databases, Google's policies and practices regarding:
- (a) The recording, storage, and retention of any experiments, evaluations, results, or analyses in or directly related to those databases.
  - (b) The selection of what data, whether generated directly from any display advertising business component at the log-level, aggregate level, in any proto-buffer, or any other form, to store in those databases and for any experiments, evaluations, results, or analyses that use, analyze, or access data from either database.
  - (c) The criteria for selection and sampling of data, including for statistical significance, representativeness, reliability, completeness, and any considerations of statistical or other bias, for those databases and for any experiments, evaluations, results, or analyses that use, analyze, or access data from either database.
  - (d) Use of the results, data, and analyses from those databases by Google's employees and executives including the evaluation or analysis of the following on Google's display advertising business components: (i) the impact or likely impact of proposed changes; (ii) whether to make any changes to those components; (iii) the result or impact of any changes made; and (iv) the performance or operation of any of those components.

- (e) The identities, including by name and/or title, of any Google employees or executives who approve any experiments, launch reports, or other analyses from those databases.
8. The definitions and topics regarding datasets produced by Google in this Litigation and the preceding Investigation:
- (a) For the “Google Ads” dataset Google produced in this Litigation in response to Plaintiffs’ RFP No. 7<sup>1</sup>:
- i. The definitions of fields and of values within fields, as well as any numerical interrelations between fields;
- (b) For the “DV360” dataset produced by Google in this Litigation in response to Plaintiffs’ RFP No. 7<sup>2</sup>:
- i. The definitions of fields and of values within fields, as well as numerical interrelations between fields;
  - ii. Whether the values “auction\_type\_name” are mutually exclusive;
  - iii. How certain fields may be used to calculate the net revenue retained by Google;
- (c) For the “XP Daily” dataset produced by Google in this Litigation in response to Plaintiffs’ RFP No. 7<sup>3</sup>:

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1 For clarity, this is the “Google Ads” dataset referenced in the July 7, 2023, letter from David Pearl to Kelly D. Garcia.

2 For clarity, this is the “DV360” dataset referenced in the July 7, 2023, letter from David Pearl to Kelly D. Garcia.

3 For clarity, this is the “XP Daily” dataset referenced in the July 7, 2023, letter from David Pearl to Kelly D. Garcia.

- i. The definitions of fields and of values within fields, as well as numerical interrelations between fields;
- ii. How the field “product” relates to the field “pub\_product” in other datasets;
- iii. Which values in the “product” field indicate that buyside product was used to make a purchase through AdX;

(d) For the “DV360 XBridge” dataset produced by Google in this Litigation in response to Plaintiff’s RFP No. 7<sup>4</sup>:

- i. The definitions of fields and of values within fields, as well as numerical interrelations between fields;

(e) For the “AdX/Open Bidding” dataset produced by Google in this Litigation in response to Plaintiff’s RFP No. 7<sup>5</sup>:

- i. The definitions of fields and of values within fields, as well as numerical interrelations between fields;
- ii. Which column contains information about the “(viii) ad buying tool used in AdX (e.g., The Trade Desk) or ad exchange used in Open Bidding (e.g., Index Exchange)” as described in the July 7, 2023, letter from David Pearl to Kelly D. Garcia;

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4 For clarity, this is the “DV360 XBridge” dataset referenced in the July 7, 2023, letter from David Pearl to Kelly D. Garcia.

5 For clarity, this is the “AdX/Open Bidding” dataset referenced in the July 7, 2023, letter from David Pearl to Kelly D. Garcia.

- iii. Which column contains information about the “(vi) publisher (i.e., a DFP publisher ID and/or a web property ID).” as described in the July 7, 2023, letter from David Pearl to Kelly D. Garcia;
  - iv. Whether and how to distinguish video, display, and audio ads within the field “creative\_ad\_format” or a combination of fields;
- (f) For datasets “GOOG-AT-EDVA-DATA-000000002.csv” and “GOOG-AT-EDVA-DATA-000000007.xlsx” produced by Google in this Litigation<sup>6</sup>:
- i. The definitions of fields and of values within fields, as well as numerical interrelations between fields;
  - ii. Whether publishers may be uniquely identified by using these fields;
- (g) For datasets “GOOG-AT-EDVA-DATA-000000005.xlsx” and “GOOG-AT-EDVA-DATA-000000007.csv” produced by Google in this Litigation<sup>7</sup>:
- i. The definitions of fields and of values within fields, as well as numerical interrelations between fields;
  - ii. Whether the figures the information in those datasets cover information worldwide or information restricted to the United States.

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<sup>6</sup> For clarity, these are the datasets referred to under the “Data Produced in Response to RFP 51” heading in the July 7, 2023, letter from David Pearl to Kelly D. Garcia.

<sup>7</sup> For clarity, these are the datasets referred to under the “Data Produced in Response to RFP 51” heading in the July 7, 2023, letter from David Pearl to Kelly D. Garcia.

(h) For dataset “GOOG-AT-EDVA-DATA-000000006.xlsx” produced in this Litigation<sup>8</sup>:

- i. The definitions of fields and of values within fields, as well as numerical interrelations between fields;
- ii. Any actual or likely explanations Google has for missing network name, network parent name, and reservation type values;

(i) For dataset “GOOG-AT-EDVA-DATA-000000012”<sup>9</sup>:

- i. The definitions of fields and of values within fields, as well as numerical interrelations between fields;
- ii. Whether the “DISPLAY\_OTHER” and “DISPLAY\_IMAGE” values under the “ad\_type” variable represent all display advertising in the data;

(j) For the data produced by Google in this Litigation and contained in the range GOOG-AT-EDVA-DATA-000000175 to -00385<sup>10</sup>:

- i. The definitions of fields and of values within fields, as well as numerical interrelations between fields;
- ii. The interpretation of the “<undefined>” values in the fields that define the GDN publisher names;

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<sup>8</sup> For clarity, these are the datasets referred to under the “Data Produced in Response to RFP 51” heading in the July 7, 2023, letter from David Pearl to Kelly D. Garcia.

<sup>9</sup> For clarity, these are the datasets referred to under the “Data Produced in Response to RFP 52” heading in the July 7, 2023, letter from David Pearl to Kelly D. Garcia.

<sup>10</sup> For clarity, these are the datasets referred to under the “Data Produced in Response to RFP 54” heading in the July 7, 2023, letter from David Pearl to Kelly D. Garcia.



iii. Whether there were any reporting or measurement changes during the time period contained in the dataset related to the “instream” indicator;

(k) For the dataset “GOOG-AT-EDVA-DATA-000000386” and any related data produced by Google in this Litigation in response to Plaintiffs’ RFP No. 55<sup>11</sup>:

- i. The definitions of fields and of values within fields, as well as numerical interrelations between fields;
- ii. The composition of fees in the “DV360\_platform\_fees” field and whether any operating costs, take rate, or other pricing information is included in the values provided for that variable;

(l) For the datasets “GOOG-AT-EDVA-DATA-000000002” and “GOOG-AT-EDVA-DATA-000000007” and any related data produced by Google in this Litigation in response to Plaintiffs’ RFP No. 55<sup>12</sup>:

- i. The definitions of fields and of values within fields, as well as numerical interrelations between fields;
- ii. Any explanation of any blank values in the “transaction\_type” field, especially with respect to any relationship between those blank values and any open auction transaction;

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<sup>11</sup> For clarity, this is data referred to under the “Data Produced in Response to RFP 55” heading in the July 7, 2023, letter from David Pearl to Kelly D. Garcia.

<sup>12</sup> For clarity, this is data referred to under the “Data Produced in Response to RFP 55” heading in the July 7, 2023, letter from David Pearl to Kelly D. Garcia.

iii. Any relationship those fees in the “total\_queries” and “matched\_queries” fields have to any impressions sold or purchased and any Google revenues;

iv. The ‘Interpretation of zero and negative values in the variables “total\_queries,” “matched\_queries,” “impression,” and “sellside\_revenue\_usd”’.

(m) For the datasets “GOOG-AT-EDVA-DATA-000000387” and “GOOG-AT-EDVA-DATA-000000388” and any related data produced by Google in this Litigation in response to Plaintiffs’ RFP No. 55<sup>13</sup>:

i. The definitions of fields and of values within fields, as well as numerical interrelations between fields;

ii. Costs included in the “google\_net\_revenue\_usd” field and any relationship of that field to take rates, operating costs, or any other costs or revenues.

9. For the data provided in the Google Ads, GAM, and DV360 log-level datasets listed in the July 28, 2023, letter from David Pearl to Michael J. Freeman that have been produced or that will be produced in this Litigation and the GAM log-level data set that was produced in response to a CID issued by the United States that preceded this Litigation:

(a) The use of the information and data contained in each dataset by Google’s employees and executives in the ordinary course of Google’s business;

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<sup>13</sup> For clarity, this is data referred to under the “Data Produced in Response to RFP 55” heading in the July 7, 2023, letter from David Pearl to Kelly D. Garcia.

- (b) The individual sources of information from which data was pulled, extracted, copied, or otherwise derived from each dataset including whether all fields and data from those individual sources of information were included in the log-level data sets;
  - (c) The processes of pulling, assembling, and quality-checking these datasets as described in part in the July 28, 2023, letter from David Pearl to Michael J. Freeman; and
  - (d) The definition of each field, variable, column, and/or value in each dataset including examples of ad formats contained in the data.
10. For the GAM log-level bid dataset referenced in the July 14, 2023, letter from David Pearl to Michael J. Freeman:
- (a) Any reasons, including those listed in the letter, that “one cannot infer that a remnant line item competed in the GAM auction based solely on information in the inventory key-value for a given ad query.”
  - (b) The percentages of impressions in the dataset for which line items are ineligible to compete in GAM auctions for the reasons listed on pages 2 and 3 of the July 14, 2023, letter.
11. For the Header Bidding Monitor datasets listed and referenced in the July 14, 2023, letter from David Pearl to Kelly D. Garcia:

- (a) The individual sources of information from which data was pulled, extracted, copied, or otherwise derived for each dataset (or version thereof) including whether all fields and data from those individual sources of information were included in the datasets;
- (b) The processes of pulling and assembling and, if applicable, quality-checking, the Header Bidding Monitor datasets;
- (c) A list of the fields and types of data available in the “DRX-Internal-Stats” datasets referenced in that July 14, 2023, letter;
- (d) The ways Google employees and executives use the “DRX-Internal-Stats” datasets referenced that July 14, 2023, letter in the ordinary course of business;
- (e) A list of the fields and types of data available in the “Header-Bidding-Detection” datasets referenced in that July 14, 2023, letter;
- (f) The ways Google employees and executives use the “Header-Bidding-Detection” datasets referenced that July 14, 2023, letter in the ordinary course of business;
- (g) Explanations of the cause(s), whether actual or likely causes, of missing network name and/or network parent name information in these datasets;
- (h) Explanations of the cause(s), whether actual or likely causes, of missing reservation type information in these datasets; and

- (i) The ways Google employees and executives use the Header Bidding Monitor datasets, or any subset thereof, or the sources of data or information contained in these datasets in the ordinary course of Google's business.
- 12. Google's policies, procedures, and practices regarding the tracking of the frequency or prevalence of header bidding, including winning, losing, and ineligible bids, for or in relation to any of its display advertising business components including:
  - (a) The processes and systems used by Google to identify those header bidding bids;
  - (b) Google's estimates or measurements of the frequency, proportion, or prevalence of header bidding bids in any auctions run by or bid into by Google's display advertising business components; and
  - (c) The use of information about header bidding, including measurements, analyses, and studies of the prevalence or proportion of header bidding, by Google employees and executives.
- 13. Google's measurement, evaluation, and understanding of the value, whether expressed as dollar amounts or some other metric, whether monetary or non-monetary and whether measured by the quality, utility, or usefulness of any data, its bid, pricing, audience, targeting, or related data by its executives, engineers, product managers, and employees. For clarity, this includes Google's measurement, evaluation, and understanding of the value of any data whether considered alone or in conjunction with other datasets with the following considerations:

- (a) Whether the joining, simultaneous use, or any other linkage or association of the data with any other data or dataset increases, decreases, or causes any change in the value, whether considered on a monetary or non-monetary basis;
  - (b) The source of data or datasets, including from display advertising customers (publisher and advertisers), end users, third-parties and third-party competitors (e.g., non-Google exchanges, ad networks, etc.), Google's other products and services (e.g., Search, GMail, YouTube, signed in with Google, etc.); and
  - (c) Google's use of the data or datasets, including for ad targeting, audience identification, impression pricing, arbitrage, dynamically varying and calculating optimal prices or revenue shares, diagnostic purposes, ad and impression quality, spam and fraud considerations, and for any other purpose.
14. Google's processes for measuring and evaluating the impact of the collection of data of any type on its business performance or processes including the operation and optimization of auctions, dynamic allocation, dynamic revenue share, bid predictions, smart bidding, impression pricing, and spam, fraud, and ad quality whether as an absolute measure or relative measure (including with respect to any competitors).
15. From January 1, 2010 to the present, how data is passed, shared, or exchanged among or between Google Ad Manager, Google Display & Video 360, Google Ads, and any other product offered by Google that facilitates the sale or purchase of digital display advertising, and all subsidiary products and predecessor products (including DoubleClick for Publishers or DFP, AdX, DoubleClick Bid Manager or DBM, AdWords, AdMeld, and AdSense for Content) and:

- (a) Identification or descriptions of the contents of that data;
  - (b) How Google's products, employees, and executives use that data in the ordinary course of Google's business; and
  - (c) How these data differ from data transmitted from Google products to third-party ad tech products.
16. From January 1, 2010 to the present, identification of any datasets accessible to and accessed by the following products (including those accessible to multiple products): Google Ad Manager , Google Display & Video 360, Google Ads, and any other product offered by Google that facilitates the sale or purchase of digital display advertising, and all subsidiary products and predecessor products (including DoubleClick for Publishers or DFP, AdX, DoubleClick Bid Manager or DBM, AdWords, AdMeld, and AdSense for Content) and:
- (a) Descriptions of the contents of that data; and
  - (b) How Google's products, employees, and executives use that data in the ordinary course of Google's business.
17. The nature, function, and operation of each of the following, including any data and algorithms utilized:
- (a) Google's incorporation of DoubleClick products into any of its existing products;
  - (b) Google Ads' bidding and buying of digital display advertising impressions on AdX, other ad exchanges, and any other of digital display advertising;

- (c) AdX's bidding and buying of digital display advertising impressions from publishers, including any restrictions, limitations, or distinctions when AdX bids for or buys digital advertising impressions from publishers utilizing DFP versus publishers utilizing another Publisher Ad Server;
- (d) Dynamic Allocation, including any contractual or technical limitations imposed by Google on the ability of any ad exchange to utilize dynamic allocation or bid in real-time for digital display advertising impressions;
- (e) Any contractual or technical limitation on a publisher's ability to utilize technology that dynamically or programmatically allocates ad calls based on actual or estimated real-time pricing information;
- (f) DFP's transmission of information to AdX prior to AdX conducting an auction for a digital display advertising impression, including information related to price floors or the price of any line item in DFP;
- (g) Google's incorporation of AdMeld products and technology into its existing products, and the discontinuation of any AdMeld product, technology, or research/development project;
- (h) Project Bell;
- (i) Sell-side Dynamic Revenue Share;
- (j) Project Poirot, including (i) the bases by which it lowers bids, (ii) how Poirot applies to AdX; (iii) how Poirot applies to other exchanges; and (iv) how predicted highest other bid works, including how predicted highest other bid interacts with Poirot and how predicted highest other bid affects the bids submitted by AdX;



- (k) Project Bernanke;
- (l) Project Alchemist;
- (m) Unified Pricing Rules; and
- (n) Smart Bidding.

18. All procompetitive justifications or benefits for each of the following:

- (a) Google's acquisition of DoubleClick;
- (b) Google's restriction of Google Ads' advertiser demand exclusively to AdX;
- (c) Google's restriction of effective real-time access to AdX exclusively to DFP;
- (d) Google's limitation of dynamic allocation bidding techniques exclusively to AdX;
- (e) Google's providing AdX with a "last look" auction advantage over rival exchanges;
- (f) Google's acquisition of AdMeld;
- (g) Google's use of Project Bell;
- (h) Google's deployment of sell-side Dynamic Revenue Share;
- (i) Google's use of Project Poirot; and
- (j) Google's introduction of Unified Pricing Rules.

19. Google's business relationships with advertisers and advertising agencies, including the Federal Agency Advertisers.

20. Google's marketing efforts directed towards advertisers, including the Federal Agency Advertisers.

21. Communications with advertising agencies involving advertising campaigns for the Federal Agency Advertisers.

22. The identification and Google's understanding of terms of contracts, agreements, or arrangements involving purchases of display advertising by or on behalf of the Federal Agency Advertisers.
23. Any justifications or facts Google has that divestiture or other separation, whether by firewalls or any internal separations within Google or its parent company, Alphabet, Inc., of any of its display advertising business components, would be harmful to its products, consumers, publishers, advertisers, competitors, or users who visit web pages.
24. Identification of any technical infrastructure that Google contends cannot be separated from or used to support any of its display advertising business components if Google were ordered to divest any of its products. In addition, any justifications or facts supporting Google's positions regarding the inability or infeasibility of separating any technical infrastructure.
25. Google's document retention policies, including (a) its preservation policies and practices for instant messages or chats; (b) any litigation hold(s) that Google issued with respect to this Investigation or Litigation; and (c) whether, when, and in what circumstances Google suspended its 24-hour auto-delete policy for chat messages for chat messages related to this Investigation or Litigation and/or other ongoing or reasonably-anticipated litigations and/or investigations.
26. The extent to which any document custodian in this case conducted chats with the default "history off" setting enabled, including: (a) each employee subject to a litigation hold that may have conducted or did conduct "history off" chats regarding matters potentially relevant to this Investigation or Litigation, and the extent to which they did so; and (b)

any direction or statements that Google provided to its employees about conducting chats with the “history off” or “off the record.”

27. Google’s efforts, if any, to monitor or audit whether document custodians in this case turned their chat history “on” when discussing matters potentially relevant to this Litigation and the preceding Investigation.

28. The factual basis for Google’s Tenth and Thirteenth Affirmative Defenses.<sup>14</sup>

29. The factual basis for Google’s affirmative defenses of laches, waiver, and estoppel as set forth in its Answer.

30. The factual basis for the interrogatory responses provided in Google’s Response to Plaintiff States’ Fourth Set of Interrogatories.

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<sup>14</sup> The parties are continuing to meet and confer concerning discovery requests related to Google’s Tenth and Thirteenth Affirmative Defenses. In the event that the parties agree to, or the Court compels, fact discovery concerning Google’s Tenth and Thirteenth Affirmative Defenses, Plaintiffs will seek testimony on this topic.